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Regulatory
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Final Regulation Agency Background Document

Agency name	Virginia Department of Health
Virginia Administrative Code (VAC) citation	12 VAC 5-585
Regulation title	Amendments to the Biosolids Use Regulations
Action title	Final Regulations
Date this document prepared	April 27, 2007

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 36 (2006) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

Brief summary

Please provide a brief summary (no more than 2 short paragraphs) of the proposed new regulation, proposed amendments to the existing regulation, or the regulation proposed to be repealed. Alert the reader to all substantive matters or changes. If applicable, generally describe the existing regulation. Also, please include a brief description of changes to the regulation from publication of the proposed regulation to the final regulation.

The *Biosolids Use Regulations* (12 VAC 5-585) are to be amended to provide regulations and standards for enforcement related to local oversight of land application operations and provide requirements for land application site management practices to protect odor sensitive receptors, ensure permit compliance and address nutrient management concerns.

Statement of final agency action

Please provide a statement of the final action taken by the agency including (1) the date the action was taken, (2) the name of the agency taking the action, and (3) the title of the regulation.

The State Board of Health adopted the proposed amendment to the Biosolids Use Regulations as a final amendment at their April 20, 2007 meeting in Richmond, Virginia

Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly chapter numbers, if applicable, and (2) promulgating entity, i.e., agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

Legislation passed by the General Assembly (SB 1088, Acts of Assembly c. 681, 2003) and signed into law by the Governor, amended § 32.1-164.5 of the *Code of Virginia* (available electronically at <http://leg1.state.va.us/cgi-bin/legp504.exe?031+ful+CHAP0681>), requiring that the State Board of Health (Board) adopt regulations that included requirements for site specific nutrient management plans developed by persons certified in accordance with the *Code of Virginia* § 10.1-104.2, prior to land application for all sites where sewage sludge is land applied, and requirements for approval of nutrient management plans by the Department of Conservation and Recreation (DCR) prior to permit issuance under specific conditions. This legislation also added to the *Code of Virginia* § 32.1-164.7, that provided for local government enforcement of the requirements specified in the *Biosolids Use Regulations* (Regulations) and the resolution of any disputed local enforcement action by the State Health Commissioner. In addition, Legislation passed by the General Assembly (HB 2624, Acts of Assembly c. 593, 2005) and signed into law by the Governor, amended the *Code of Virginia* § 32.1-164.5, requiring that the State Board of Health (Board) develop regulations specifying and providing for extended buffers to be employed for application of sewage sludge (i) to hay, pasture, and forestlands; or (ii) to croplands where surface incorporation is not practicable or is incompatible with a soil conservation plan meeting the standards and specifications of the U.S. Department of Agriculture Natural Resources Conservation Service. Such extended buffers may be included by the Virginia Department of Health (VDH) as site specific permit conditions, as an alternative to surface incorporation when necessary to protect odor sensitive receptors, as determined by VDH or the local government (available electronically at <http://leg1.state.va.us/cgi-bin/legp504.exe?051+ful+CHAP0593>).

Purpose

Please explain the need for the new or amended regulation. Describe the rationale or justification of the proposed regulatory action. Detail the specific reasons it is essential to protect the health, safety or welfare of citizens. Discuss the goals of the proposal and the problems the proposal is intended to solve.

The Regulations provide the means to protect public health from improper and unregulated disposal of sewage sludge. This amendment is designed to provide a consistent and uniform set of state requirements that will ensure that biosolids are land applied in accordance with permit requirements including compliance with nutrient management plans and extended buffers to protect odor sensitive individuals. This amendment includes requirements and procedures for ensuring that land application of biosolids complies with site specific permits issued through the *Biosolids Use Regulations* and provides for resolution of disputes involving local governments and land applicers concerning permit compliance issues and provides for land application site management practices, including nutrient management plan

requirements and extended buffer zones for surface application without incorporation, to protect odor sensitive receptors. VDH anticipates that the development of state requirements will help improve the credibility of the VDH permit program and prevent any extended litigation that may be brought by permitted entities concerning compliance with local government ordinances that restrict or effectively ban land application of biosolids on permitted sites.

Substance

Please identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. A more detailed discussion is required under the "All changes made in this regulatory action" section.

The Regulations are to be amended to provide for resolution of disputes involving local governments and land applicers concerning permit compliance issues and for land application site management practices, including nutrient management plan requirements and extended buffer zones for surface application without incorporation, to protect odor sensitive receptors.

The Regulations Advisory Committee (BURAC) has assisted the VDH in developing draft amendments presented to the Board of Health for approval as Proposed Amendments in accordance with the Administrative Process Act (APA). The Final Amendments will have to be adopted by the Board in accordance with the APA, in order to meet the mandate stipulated in the *Code of Virginia* sections 32.1-164.6 -164.7. The amended regulations will include requirements for resolving enforcement disputes between permittees and localities that have adopted an ordinance for testing and monitoring land application pursuant to the *Code of Virginia* section 62.1-44.19:3. The amendments will also require that nutrient management plans be prepared for all sites permitted for land application of biosolids. In addition, DCR approval of nutrient management plans will be required for either those sites receiving biosolids more frequently than once every three years at greater than 50 % of the agronomic rate established by the *Biosolids Use Regulations*, or sites owned or operated in conjunction with a confined animal feeding operation.

Issues

Please identify the issues associated with the proposed regulatory action, including:

- 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions;*
- 2) the primary advantages and disadvantages to the agency or the Commonwealth; and*
- 3) other pertinent matters of interest to the regulated community, government officials, and the public.*

If there are no disadvantages to the public or the Commonwealth, please indicate.

The Board approved the submittal of a Notice of Intended Regulatory Action (NOIRA) for an amendment to the Regulations concerning both permit enforcement issues and land application site management practices at its January 21, 2005 meeting. Since that time the BURAC has assisted the VDH in developing the draft amendment language now presented to the Board for approval. The draft amendment reflects the recommendations from a majority of committee members. Certain sections of the draft amendment were developed by Professor Greg Evanylo, with the Department of Crop and Soil Environmental Sciences at Virginia Polytechnic Institute and State University. The State Board of Health approved the draft amendments as proposed with a minor revision concerning the removal of Table 14

and reference to “Calcium Carbonate Equivalency” (CCE), at the regular meeting held on October 21, 2005, in the Town of Chincoteague.

The advantage of adopting the requested amendments is that the credibility of this controversial state permit program will be enhanced. By establishing reasonable requirements, the most economical and most beneficial means of sludge management will continue to be available to the owners of sewage treatment works, who are primarily metropolitan governments.

Changes made since the proposed stage

Please describe all changes made to the text of the proposed regulation since the publication of the proposed stage. For the Registrar’s office, please put an asterisk next to any substantive changes.

The following changes have been made to the proposed amendments since they were published in the *Virginia Register*, Volume 23, Issue 3, October 16, 2006:

12 VAC 5-585-510- Inserted:

[All biosolids application rates, application times and other site management operations shall be restricted as specified in the approved management practices plan. The management practices plan shall include a nutrient management plan as required by this chapter, 12 VAC 5-585-630 and prepared by a certified nutrient management planner as stipulated in regulations promulgated pursuant to the *Code of Virginia* § 10.1-104.2].

12 VAC 5-585-510A3 – Inserted:

The biosolids application rate, [application timing and all other site management practices] shall be restricted to the following criteria in accordance with the approved ~~operation~~ management practices plan [including the nutrient management plan which may prescribe more restrictive site management practices than the following criteria]:

12 VAC 5-585-510A3.c(2)- revised:

(i):change 5.0% to 6.0%

and added to the last sentence of that first paragraph in Restrictions, ... characterized as well drained in [accordance with the nutrient management plan].

Also, added to the last sentence of that section,

..... and December 21 [in accordance with the nutrient management plan. Biosolids should not be applied any earlier than 30 days prior to spring planting on environmentally sensitive sites in accordance with the nutrient management plan.]

12 VAC 5-585-510A3.d(2)- revised:

(2) Extended buffer setback distances. For applications where surface applied biosolids are not incorporated the department [may include as a site specific permit condition authorization for the department, or the local monitor with approval of the department, to require (or the local monitor with approval of the department) may require as a site-specific permit condition,] extended buffer zone setback distances when necessary to protect odor sensitive receptors.

12 VAC 5-585-510B3 – Inserted:

...application rates shall be ~~[determined by the division]~~ in accordance with the provisions of ~~[subdivision A 3 of this section- the management practices plan]~~ and ~~[based on nitrogen uptake rates and yields as recommended in]~~ information

12 VAC 5-585-510C3 - Inserted:

shall be established ~~[by the division in accordance with subdivision A 3 of this section and the recommendation of]~~ in the management practices plan through recommendations provided by] appropriate...

12 VAC 5-585-610 – The section title word Phosphorus has been replaced by the word Biosolids and the previous paragraph in that section replaced with:

[If soils exhibit very high soil test phosphorus of 55 or more parts per million phosphorus (Mehlich I analytical test procedure or equivalent procedure approved by the Department of Conservation and Recreation), the maximum application rates for phosphorus contained in biosolids together with phosphorus contained in other applied nutrient sources to the site and all applicable phosphorus management practices shall be consistent with the nutrient management plan.]

In addition, certain Plant Available Nitrogen values and estimated plant yields in Table 11 were revised.

Public comment

Please summarize all comments received during the public comment period following the publication of the proposed stage, and provide the agency response. If no comment was received, please so indicate.

Commenter	Comment	Agency response
Department of Planning and Budget (DPB)	The DPB Economic Impact Analysis (EIA) Statement was published with the proposed amendments in the Virginia Register Volume 23, Issue 3, October 16, 2006.	The DPB analysis was directed to the potential fiscal impacts on the Biosolids Contractors and land appliers that may be incurred upon adoption of the proposed amendments. However, DPB also considered the potential environmental and public health impacts may occur upon adoption of the proposed amendments. VDH concurs substantially with the conclusions drawn and the analysis contained in the EIA Statement.
Department of Conservation and	The DCR staff requested that the amendment 12 VAC 5-585-510A3, require that all nutrient	The <i>Biosolids Use Regulations</i> provide for issuance of permits to

<p>Recreation (DCR)</p>	<p>applications (rates and timing) on sites permitted for land application of biosolids, comply with the nutrient management plans written by DCR certified nutrient management planners.</p> <p>For consistency between the <i>Biosolids Use Regulations</i> and the DCR Regulations for certifying nutrient management planners, DCR recommended that the term “management practices plan” be replaced by the terms, “nutrient management plan” in numerous places in the amendment.</p> <p>DCR also recommended including specific nutrient application rates and timing restrictions (4 VAC 5-15) in the amendment and in other sections of the <i>Biosolids Use Regulations</i> not proposed in the amendment.</p> <p>The DCR staff also requested changes to certain land application site slope requirements and nutrient application rates.</p> <p>In addition, DCR requested that the amendment include land application requirements for phosphorus and potassium.</p> <p>DCR staff requested additional changes to sections 12 VAC 5-585-480, of the <i>Biosolids Use Regulations</i>, as well as Table 11, and sections 520 and 210 (that were not included in the amendment).</p>	<p>land applicers and enforcement of those permits, but does not provide for regulating farming practices. The DCR Regulations provide for certifying nutrient management planners and specialists and those regulations apply to the content of the nutrient management plan, but do not provide for permits regulating farming practices.</p> <p>The management practices plan that land applicers provide with a permit application is a comprehensive document that includes information on biosolids treatment and quality, transportation and storage, as well as the nutrient management plan. As the management practices plan will be a part of the land applicers permit, specific references to the nutrient management plan in the amendment may not be necessary. However, the VDH Biosolids Program to ensure that appropriate nutrient management practices are used by permitted land applicers, is recommending the following bracketed revisions to the amendment in response to the DCR comments:</p> <p>12 VAC 5-585-510- Insert: <u>[All biosolids application rates, application times and other site management operations shall be restricted as specified in the approved management practices plan. The management practices plan shall include a nutrient management plan as required by this chapter, 12 VAC 5-585-630 and prepared by a certified nutrient management planner as stipulated in regulations promulgated pursuant to the Code of Virginia § 10.1-104.2].</u></p> <p>12 VAC 5-585-510A3 – Insert:</p>
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		<p>The biosolids application rate, <u>[application timing and all other site management practices]</u> shall be restricted to the following criteria in accordance with the approved operation <u>management practices plan [including the nutrient management plan which may prescribe more restrictive site management practices than the following criteria]</u>:</p> <p>12 VAC 5-585-510A3.c(2):</p> <p>(i):change 5.0% to 6.0% and add, to the last sentence of that first paragraph in Restrictions, ... <u>characterized as well drained</u> in <u>[accordance with the nutrient management plan]</u>.</p> <p>Also, add to the last sentence of that section, <u>and December 21</u> [in accordance with the nutrient management plan. Biosolids should not be applied any earlier than 30 days prior to spring planting on environmentally sensitive sites in accordance with the nutrient management plan.]</p> <p>12 VAC 5-585-510A3.d(2)- revise:</p> <p><u>(2) Extended buffer setback distances. For applications where surface applied biosolids are not incorporated the department [may include as a site-specific permit condition authorization for the department, or the local monitor with approval of the department, to require (or the local monitor with approval of the department) may require as a site-specific</u></p>
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		<p><u>permit condition,] extended buffer zone setback distances when necessary to protect odor sensitive receptors.</u></p> <p>12 VAC 5-585-510B3 – Insert:</p> <p>...application rates shall be [determined by the division] in accordance with the provisions of [subdivision A 3 of this section] <u>the management practices plan</u> and [based on nitrogen uptake rates and yields as recommended in] <u>information ...</u></p> <p>12 VAC 5-585-510C3 - Insert:</p> <p>shall be established [by the division in accordance with subdivision A 3 of this section and the recommendation of in the management practices plan through recommendations provided by] <u>appropriate...</u></p> <p>12 VAC 5-585-610 – The section title word Phosphorus has been replaced by the word Biosolids and the current paragraph is to be replaced with: <u>[If soils exhibit very high soil test phosphorus of 55 or more parts per million phosphorus (Mehlick I analytical test procedure or equivalent procedure approved by the Department of Conservation and Recreation), the maximum application rates for phosphorus contained in biosolids together with phosphorus contained in other applied nutrient sources to the site and all applicable phosphorus management practices shall be consistent with the nutrient management plan.]</u> In addition, it is recommended that certain Plant Available Nitrogen</p>
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		values and estimated plant yields in Table 11 be revised.
Chesapeake Bay Foundation (CBF)	<p>CBF also recommended that the regulations should include an explicit requirement that nutrient management plans must be developed and implemented for all sites receiving biosolids, including forestland (silviculture) and reclaimed land.</p> <p>CBF strongly recommended that the proposed regulations mirror the requirements in the Nutrient Management Training and Certification Regulations.</p>	<p>VDH staff believes that the amendment with the requirements now included in the <i>Biosolids Use Regulations</i> will provide the necessary controls for nutrient applications to permitted sites. VDH staff do not believe that the DCR requirements for preparing nutrient management plans need to be repeated in the <i>Biosolids Use Regulations</i>.</p>
Recyc Systems, Inc. (Recyc Systems)	<p>Recyc Systems requested that VDH use the language contained in section 32.1-164.7 of the <i>Code</i> in section 12 VAC 5-585-70E of the amendment.</p> <p>Recyc Systems recommended using the term setback distances instead of buffer zones in section 12 VAC 5-585-510A1.d and removing the “400 feet or more” from the extended buffer setback distance requirements in that section.</p> <p>Recyc Systems recommended using the term “site specific nutrient management plan” be used in section 12 VAC 5-585-630A and that confined poultry feeding operations be included with the references to confined animal feeding operations as required in the <i>Code</i>.</p> <p>Recyc Systems also opposed obligating the farmer to comply with the DCR approved nutrient management plan through the management practices plan prepared by the land applier.</p>	<p>VDH staff do not agree that specific language in the <i>Code</i> should be restated in the Regulations.</p> <p>VDH staff believe that the term buffer is a more comprehensive term than is the term setback distances.</p> <p>The buffer distance of 200 feet currently specified in the <i>Biosolids Use Regulations</i> is based on previous studies of liquid aerosol drift downwind from the point of application of wastewater. Doubling of that buffer to provide additional protection to residents with pre-existing illness was considered an appropriate precaution.</p> <p>VDH staff recognize that the management practices plan will include a site specific nutrient management plan in addition to other necessary information. VDH staff believe that the designation of confined animal feeding operations as used in the <i>Biosolids Use Regulations</i> includes all domestic livestock. VDH staff agree that the <i>Biosolids Use Regulations</i> should not effectively be regulating farmers as to their agricultural business practices.</p>
The Virginia Association of	VAMWA states that the title “disputes involving local ordinances” for 12 VAC 5-585-	VDH staff that the term “disputes involving local ordinances” for 12

<p>Municipal Wastewater Agencies (VAMWA)</p>	<p>70 E is somewhat inaccurate in that it suggests that this provision deals with disputes about the local ordinance itself. Instead, this provision relates to disputes about an alleged violation of the state Biosolids Use Regulations. For clarity, VAMWA suggests using the same title as used in the statute – “Local enforcement of sewage sludge regulations.”</p> <p>VAMWA with respect to 12 VAC 5-585-70 E of the proposed amendment, considers that it is necessary to include the substance from the first paragraph of section 32.1-164.7 of the <i>Code</i> including the requirements for an abatement order. As set forth in the statute, an abatement order (1) shall identify the activity constituting the violation, (2) shall specify the code provision or regulation violated by the activity, and (3) shall order that the activity cease immediately. Including this statutory language will help eliminate any potential confusion about the scope and intent.</p> <p>VAMWA recommends that with respect to 12 VAC 5-585-70 E, paragraph 1 refers to “the determination by the commissioner” and paragraph 2 refers to the “determination by the division.” In both of these instances the statute requires that these determinations be made by “the Department.” For consistency with the statute, the proposal must be changed to provided that these decisions are by “the Department.”</p> <p>For clarity, VAMWA recommends with respect to 12 VAC 5-585-510A3.d, providing one or two examples that illustrate the overall concept of “odor sensitive receptors”. At the end of the first sentence, after “odor sensitive receptors,” we recommend simply inserting “such as schools, day care centers and similar facilities depending on their operations at the time of land application.”</p>	<p>VAC 5-585-70 E is appropriate as although the disagreement between a land applier and the local monitor would involve questions of compliance with the <i>Biosolids Use Regulations</i>, the local monitor position is established by local ordinance. The term “sewage sludge regulations” could include the DEQ regulations which may not apply to the disagreement about compliance with the <i>Biosolids Use Regulations</i>.</p> <p>VDH staff do not believe that it is necessary to repeat the language of the <i>Code</i> in the amendment. VDH believes that both the commissioner and the division are included in the term “department.” VDH staff believe that the term “odor sensitive receptors” may include institutions or residences depending on site specific factors that would be determined during evaluation of a permit application.</p>
<p>Henry Staudinger and C.W. Williams, Citizen members of the BURAC</p>	<p>Mr. Staudinger and Mr. Williams recommended that nutrient management plans that incorporate the requirements of DCR’s regulations as well as all more restrictive VDH requirements be required for all application</p>	<p>VDH staff believe that the nutrient management revisions recommended by Mr. Staudinger and Mr. Williams are similar to the DCR recommendations and</p>

	<p>sites, prior to application of biosolids and that biosolids applications must be in accordance with the nutrient management plan.</p> <p>Mr. Staudinger and Mr. Williams also recommended that in cases where the <i>Biosolids Use Regulations</i> are not complied with on any site, no further biosolids could be applied to that site or any site in which the landowner(s) has an interest or to any site operated by the farm operator and if any permittee applies biosolids to such site(s) after learning of the violations, in addition to all other penalties and corrective action, VDH shall revoke the permit. In addition, Mr. Staudinger and Mr. Williams recommended that for all biosolids applications, the department shall require extended buffer zone setback distances when necessary to protect the health and quality of life of those exposed to biosolids as well as odor sensitive receptors and buffer zone setback distances from those who may be exposed to biosolids aerosols may be extended to 400 feet or more, but shall not be less than 1.5 miles where the severe immune and other health compromised individuals may be exposed unless VDH demonstrates that there is nothing in the biosolids that may cause them serious harm, and no biosolids shall be applied within such extended buffer zones.</p> <p>Mr. Staudinger and Mr. Williams also recommended that should requirements be changed to shall requirements and that potential environmental or public health concerns be considered for protection of water quality and for decisions on buffer reductions.</p>	<p>are provided for in the requirements for a management practices plan that would be part of the permit issued to a land applier.</p> <p>VDH staff believe that permit enforcement is addressed both in the current section 12 VAC 5-585-70 of the <i>Biosolids Use Regulations</i> and this proposed amendment to that section. VDH does not believe that the use of specific enforcement provisions in various sections of the <i>Biosolids Use Regulations</i> is necessary.</p> <p>The buffer distance of 200 feet currently specified in the <i>Biosolids Use Regulations</i> is based on previous studies of liquid aerosol drift downwind from the point of application. Doubling of that buffer to provide additional protection to residents with pre-existing illness was considered an appropriate precaution. Despite the claims that particulate aerosol drift can exceed 400 feet, studies have shown that no significant particulate matter travels more than 10 feet from the point of application. Other claims of aerosols containing toxic chemical compounds due to land application of biosolids, have never been verified in previous studies. Thus, VDH does not believe that a buffer set back distance of 1.5 miles is necessary.</p> <p>The <i>Biosolids Use Regulations</i> contain the standards necessary to protect water quality and public health as established by the lack of any evidence supporting the existence of such problems around land application sites that comply with the <i>Biosolids Use Regulations</i>. Thus, VDH believes that the use of shall statements is not necessary and poses unnecessary restrictions on</p>
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		biosolids use.
<p>Public Comments Via E-Mail:</p> <p>Alvin Guthrie - Campbell County</p> <p>Georgia Ellington - Campbell County</p> <p>Lorraine Potter - Campbell County</p> <p>Kevin Williams - Campbell County</p> <p>Victor Ferguson - Campbell County</p> <p>Lynn and Andrea Ferguson - Campbell County</p> <p>Mary Amiss - Campbell County</p> <p>Tracy Meisenbach - Campbell County</p> <p>Jennifer England and Charles England - Campbell County</p> <p>Dale Ellington – Campbell County</p> <p>Georgia Webber - Campbell County</p> <p>Connie Carwile – Campbell County</p> <p>Jerianne Gardner – Isle of Wight County</p> <p>H. Glen Musick – Isle of Wight County</p> <p>Theresa W. Johnson - Isle of Wight</p>	<p>A number of individual e-mails to VDH expressed support for the revisions proposed by Mr. Staudinger and Mr. Williams.</p>	<p>The VDH response is the same as that for the comments of Mr. Staudinger and Mr. Williams.</p>

<p>County</p> <p>Thomas Finderson - Isle of Wight County</p> <p>Elizabeth and Walter Perry - Isle of Wight County</p> <p>Popie Martin – Amherst County</p> <p>Lyn n Kable - Amherst County</p> <p>Mary H. Carwile – Prince Edward County</p> <p>Karen and Pete Nyce – Farmville</p> <p>Charles and Jean Davis – Farmville</p> <p>Donna Groseclose – Cumberland County</p> <p>Jim Revell – Bedford County</p> <p>Anthony Pasciuta Jr. – Augusta County</p> <p>Helen Flowers – Frederick County</p> <p>Jesse Sullivan – Frederick County</p> <p>Charlotte Hughes – Shenandoah County</p> <p>Kit Johnston – Madison County</p> <p>Nancy Ford – Greene County</p>		
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<p>William E. Small – Louisa County</p> <p>Mike Eggleston – Sussex County</p> <p>Helen Eggleston - Sussex County</p> <p>Michael S. Harwood – Northumberland County</p> <p>June Frick – Goochland County</p> <p>Patricia Esch - Chesapeake</p> <p>Jeff Turner – Nottoway County</p> <p>Barbara L Rubin – Fairfax County</p> <p>Valerie Henderson</p> <p>Cathy Thompson</p> <p>Dave Dudley</p> <p>Carrington Connelly</p> <p>Boonemb1@aol.com</p>		
<p>A number of individuals posted comments on the Department of Planning and Budget’s Town Hall web site. The following individuals other than those listed above expressed support for the revisions proposed by Mr. Staudinger and Mr.</p>	<p>A number of individual e-mails to VDH expressed support for the revisions proposed by Mr. Staudinger and Mr. Williams. Other individuals expressed general concerns related to land application of biosolids, including: Health Effects, Water Pollution, Aerosols/Odors, Toxic Chemicals, Buffer Setback Distances, Transport and Storage Problems, Permit Compliance, Pathogens and Research Needs.</p>	<p>The VDH response is the same as that for the comments of Mr. Staudinger and Mr. Williams. General concerns not directly related to the amendment were not addressed.</p>

<p>Williams: Sharon Hart Khalil Hassan Eric Kvarnes Nancy Halgren Joy Lorien Kim Smith David Konick Bud Kreh Laurie Smith Eloise Clark William Freitag Susan</p> <p>Other individuals not previously listed and whose names are listed below, entered more general statements about their concerns for land application of biosolids: Bev Henderson Jeanne Singleton Gregory Modzelewski Nicole Wagoner Nan Carmack Nancy Raine James Jones Edrie Bays Greg Fenning Harry Stevens Lorraine Schneider Ed Hey Rebekah Crum Case Pieterman Frances Coristin Burks Harkins Joy Lorien Lynton Land Lee Allain Nancy Ford Zika Zikic David Mattichak Cheryl Blanks Robert Hale</p>		
<p>Kevin and Karen</p>	<p>Karen Martin indicated that the amendment</p>	<p>VDH staff believe that these</p>

<p>Martin – Bedford County</p>	<p>should: grant enforcement authority to local government, establish larger buffer setback distances and require DCR approved nutrient management plans. Kevin Martin recommended that the amendment include requirements for incorporation of biosolids, more stringent buffer setback requirements for odors and specific soil and water monitoring requirements.</p>	<p>issues were thoroughly considered by the BURAC and the amendment properly addresses these issues.</p>
<p>Public Hearing – Henrico County Training Center – November 9, 2006 Mr. Hunter Richardson, Synagro, Inc. Mrs. Katie Kyger Frazier, Virginia Agribusiness Council</p>	<p>A Public hearing was held on November 9, 2006 at the Henrico County Training Center. Two speakers offered comments on the amendment as follows: 1. Mr. Hunter Richardson, Synagro, Inc. stated that his company supported adoption of the amendment and recommended that the term “odor sensitive receptors” be interpreted by VDH as referring to public places, such as schools, churches and parks and areas where large groups of people congregate. 2. Mrs. Katie Kyger Frazier, Virginia Agribusiness Council stated her organization’s support of the amendment and requested that VDH work with both DCR and permitted land appliers to ensure that nutrient management plans and other site specific best management plan requirements are complied with.</p>	<p>The VDH response is the same as that stated for the VAMWA comments.</p>

All changes made in this regulatory action

Please detail all changes that are being proposed and the consequences of the proposed changes. Detail new provisions and/or all changes to existing sections.

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change and rationale
<p>12 VAC 5-585-70</p>		<p>Currently, there is no provision for resolution of local disputes concerning permit compliance.</p>	<p>In the event of a dispute between a locality that has adopted a local ordinance for testing and monitoring the land application of sewage sludge and a permittee concerning the existence of a violation, the activity alleged to be in violation shall be halted pending a determination by the commissioner. The decision of the commissioner shall be final and binding unless reversed on judicial appeal pursuant to Section 2.2-4026 of the</p>

			<p>Code of Virginia. If the activity is not halted, the commissioner may seek an injunction compelling the halting of the activity, from a court having jurisdiction.</p> <p>Upon determination by the division that there has been a violation of Sections 32.1-164.5, 32.1-164.6, or 62.1-44.19:3, of the Code of Virginia, or of any regulation promulgated under those sections, and that such violation poses an imminent threat to public health, safety or welfare, the commissioner shall commence appropriate action to abate the violation and immediately notify the chief administrative officer of any locality potentially affected by the violation.</p>
12 VAC 5-585-510 3.a		<p>Currently, the land applier provides operational information in a plan entitled “the operation plan.”</p> <p>Table 14 now provides recommendations for additions of lime to soils for various pH levels.</p>	<p>The term “operational plan” will be replaced by “management practices plan” to provide clarity and uniformity.</p> <p>Table 14 and the initial reference to CCE (calcium carbonate equivalency) will be eliminated as recommended by the BURAC to be consistent with revisions to Section 600.</p>
12 VAC 5-585-510 3.c		<p>Currently, there is no provision for requiring incorporation of surface applied biosolids to mitigate excessive odors.</p>	<p>Surface incorporation may be required on cropland by the department, or the local monitor with approval of the department, to mitigate excessive odors, when incorporation is practicable and compatible with a soil conservation plan meeting the standards and specifications of the U.S. Department of Agriculture Natural Resources Conservation Service.</p>
12 VAC 5-585-510 3.d		<p>Currently, there is no provision for requiring extended buffer setback distances around surface applied biosolids to protect odor sensitive receptors.</p>	<p>For applications where surface applied biosolids are not incorporated the department may include as a site-specific permit condition authorization for the department, or the local monitor with approval of the department, to require extended buffer zone setback distances when necessary to protect odor sensitive receptors. When necessary, buffer zone setback distances from odor sensitive receptors may be extended to 400 feet or more and no biosolids shall be applied within such extended buffer zones. In accordance with 12 VAC 5-585-260, the commissioner may</p>

			impose standards and requirements that are more stringent when required to protect public health and the environment, or prevent nuisance conditions from developing, either prior to or during biosolids use operations.
12 VAC 5-585-600		Currently, restrictions concerning the application of lime amended biosolids to soils with existing high pH levels are based on recommendations listed in Table 14.	Unless properly controlled, high rates of calcium carbonate equivalence (CCE, which is a factor that relates the liming potential of biosolids to calcium carbonate limestone) application can have an adverse effect on crop productivity by increasing the soil pH beyond the range optimum for maximum crop production. Agricultural use of biosolids with high CCE content is to be controlled to correspond with current agricultural liming practices CCE equivalent loadings should not exceed rates designed to attain soil pH values in the plow layer above 6.5 for soils located in the coastal plain and above 6.8 for soils located in other areas of the state. Corresponding application rates for lime stabilized biosolids may be computed by determining the actual CCE content of the biosolids and adjusting the recommended lime rate by the appropriate factor.
12 VAC 5-585-620		Currently, the section does not mention a site management practices plan and does not require submittal of a nutrient management plan approval letter from DCR.	A copy of a letter of approval of the nutrient management plan for the operation from DCR if required in 12-VAC-585-630A.3, is to be provided for permitted sites as stated in the management practices plan.
12 VAC 5-585-630		Currently, the section describes requirements to be addressed in an operational plan and does not require preparation of a nutrient management plan for all sites and DCR approval of such plans for frequent below agronomic rates. Table 12 lists estimated Nitrogen mineralization rates for various types of biosolids and estimated values of ammonia availability	A nutrient management plan prepared by a person that is certified as a nutrient management planner by the Commonwealth of Virginia is to be developed for all application sites, prior to biosolids application. Copies of the nutrient management plan are to be provided to the farmer operator of the site, the Department of Conservation and Recreation regional office and the Chief Executive Officer or designee for the local government, unless they request in writing not to receive the nutrient management plan. A nutrient management plan approved by the Department of Conservation and Recreation will be required for land application more

		<p>and losses for different application methods, using biosolids with pH levels above and below 10.</p>	<p>frequently than once every three years at greater than 50 percent of the annual agronomic rate on application sites and application sites owned or operated in conjunction with a confined animal feeding operation. Confined animal feeding operation means: (i) domestic livestock have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period; and (ii) crops vegetation, forage growth or post-harvest residues are not sustained over any portion of the operation site.</p> <p>All nutrient management plans shall account for all sources of nutrients to be applied to the site and include at a minimum the following information: (i) a site map indicating the location of any waste storage facilities and the fields where biosolids or animal waste will be applied; (ii) site evaluation and assessment of soil types and potential productivities; (iii) nutrient management sampling including soil monitoring; (iv) biosolids or animal waste application rates based on the overall nutrient requirements of the proposed crop and soil monitoring results; and (v) biosolids and other nutrient source application schedules and land area requirements.</p> <p>Table 12 will be updated based on more current information concerning Nitrogen mineralization and Ammonia volatilization. Table 14 will be removed from the Regulation.</p>
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This draft amendment includes requirements and procedures for ensuring that land application of biosolids complies with site specific permits issued through the Regulations and provides for resolution of disputes involving local governments and land appliers concerning permit compliance issues and provide for land application site management practices, including nutrient management plan requirements and extended buffer zones for surface application without incorporation, to protect odor sensitive receptors.

Regulatory flexibility analysis

Please describe the agency’s analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) the establishment of less stringent compliance or reporting requirements; 2) the establishment of less stringent schedules or deadlines for compliance or reporting requirements; 3) the consolidation or simplification of compliance or reporting requirements; 4) the establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5)

the exemption of small businesses from all or any part of the requirements contained in the proposed regulation.

The Virginia Department of Health may elect to request that the State Board of Health consider the following alternatives:

1. Do not revise the Biosolids Use Regulations,
2. Revise the entire set of Biosolids Use Regulations, or
3. Revise the sections of the Biosolids Use Regulations dealing only with the amendment for certification of land applicators.

Ten Private firms that land apply biosolids through contracts with Municipalities and agreements with landowners and farmers will be affected by this amendment and 52 local governments will be involved. The private firms permitted to land apply biosolids by VDH will be required to prepare and submit nutrient management plans as part of the management practices plan requirements for permit issuance. Failure to provide specific State requirements for management practices plans will likely result in adoption of local government ordinances with varying non-uniform requirements, that could have significant financial impacts on the regulated entities. Court challenges are likely to result from inconsistent and overly restrictive local ordinances, leading to expensive litigation. Although additional requests for revisions to the Biosolids Use Regulations have been submitted by local governments and private individuals, the process of revising the entire set of the Biosolids Use Regulations will likely become a long drawn out process, as the land application of biosolids is a highly controversial subject. Thus, the Virginia Department of Health is electing to recommend that only the previously listed sections of the Biosolids Use Regulations be revised at this time.

Family impact

Please assess the impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

The proposed regulatory action will have no anticipated or associated impacts on family rights to educate and supervise children. It will not discourage economic self-sufficiency and family responsibilities and commitments or decrease disposable family income.